

Evaluation of the pneumonia surveillance system in Sakaeo Province, Thailand, 1999-2001

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Background: In 2000, pneumonia was the leading cause of mortality and the third leading cause of morbidity in Thailand. Pneumonia surveillance is important to estimate burden of disease and evaluate interventions.

Methods: We evaluated the pneumonia surveillance system in Sakaeo province by analyzing three years (1999-2001) of electronic data collected by the standard reporting form used in all government and some private facilities; comparing deaths reported through surveillance to death certificate data; and interviewing a random sample of health care personnel who collect the surveillance data.

Results: An average of 925 pneumonia cases was reported each year, with an average annual incidence of 211 per 100,000 persons. Age-specific incidence peaked at 1418 per 100,000 for children < 5 years. In 1999 and 2000, there were 7 and 6 pneumonia deaths, respectively reported through the surveillance system, compared with 28 and 53, respectively, reported by death certificate. Of 72 health care personnel interviewed, 62 (82%) reported receiving training, but most of this was informal. Although a case definition for pneumonia was formalized in 1997, it is not uniformly applied. Conditions reported as pneumonia varied: when asked about specific examples, 79% of those interviewed would report "tuberculosis with pneumonia" as a case of pneumonia, while 44% would report "bronchitis rule out pneumonia".

Conclusions: This surveillance system highlights the importance of pneumonia in Thailand. Weaknesses of this system include non-standardized application of the case definition and underreporting of deaths. Formal training of surveillance personnel may increase the reliability and completeness of the data.

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